

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.
2. The oath or declaration is defective because: It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56. The oath or declaration submitted on 2/21/2006 does include a duty to disclose statement, however, the statement refers to 37 CFR 1.56(a), which is incorrect. As discussed supra, a new oath or declaration is required, including a duty to disclose statement that references 37 CFR 1.56 instead of 37 CFR 1.56(a).

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "14". Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of

an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: as discussed supra, the reference number "14", shown in Fig. 2, is not present in the specification. It is assumed by the Examiner that the reference number "14" should be added to the specification after the word "surface" in line 19 on page 9.

Appropriate correction is required.

Claim Objections

5. Claims 18 and 24 are objected to because of the following informalities: the limitation "pre-stressed position" in line 2 of claim 18 and line 2 of claim 24 lacks proper antecedent basis. It is assumed that the applicant is intending to refer to the "elastically pre-tensioned position" as disclosed in claim 13, from which claims 18 and 24 depend (directly or indirectly). See paragraph 10 below, relating to rejections of claims 18 and 24 under 35 U.S.C. 112, second paragraph, for suggested amendments to the claim. Appropriate correction is required.

6. Claim 24 is objected to because of the following informalities: the claim indicates that the second longitudinal side of the impact bumper is located at a distance from the

Art Unit: 3723

receiving space. However, claim 22, from which claim 24 depends, discloses that the second longitudinal side of the impact bumper is located within the receiving space.

Thus, the limitations of claim 22 and 24 contradict one another. It is assumed by the Examiner, that the applicant is intending to disclose, in claim 24, that the receiving space is notch shaped (claim 23) and includes a notch base, wherein the second longitudinal side of the impact bumper is located at a distance from the notch base, as supported in the specification in lines 32-36 on page 9. Therefore, for the sake of the current Office Action, the Examiner will treat the claim, as best understood to disclose that the second longitudinal side of the impact bumper is located is located at a distance from the *notch base* instead of the receiving space. It is suggested that the applicant amend claim 24 to disclose the notch base with proper antecedent basis and to amend the limitations to clarify the claim to correspond with all claim that it depends from and with the entire disclosure of the application. Appropriate correction is required.

7. Claims 34 and 35 are objected to because of the following informalities: Claims 34 and 35 both discloses a “bumper means” and “retaining means”. However, the term “means” is generally only used when invoking 35 U.S.C. § 112, 6th paragraph and both of the “bumper means” and “retaining means” are provided with structural language (the term “bumper” alone providing structure to “bumper means” and the limitations “projecting outwardly from the housing and extending along the outer surface” providing structure to the “retaining means”), thus failing to meet the 3-prong analysis for invoking 35 U.S.C. § 112, 6th paragraph. Therefore, it is suggested that the applicant change “bumper means” and “retaining means” to “bumper” (delete the word “means” from all

occurrences of "bumper means") and "retaining element", respectively, or some equivalents thereof. Appropriate correction is required.

8. Claim 36 is objected to because of the following informalities: the term "the bumper strip" in lines 1 and 2 of claim 36 lacks proper antecedent basis. It is suggested that the applicant change the term "bumper strip" to "bumper" to correspond with the suggested amendments to claims 34 and 35, as discussed supra. Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 13, 18 and 24 (along with claims 14-17 and 19-21, which all depend from claim 13) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 discloses that the second longitudinal side of the bumper strip is both under no tension and under pre-tension (or pre-stress in claims 18 and 24) at the same time. However, the term pre-tension (or pre-stress) is understood to be commonly known as an effect provided by a specific process of forming certain products, thus it is unclear how exactly the bumper strip, as claimed, is held under "pre-tension". However, the disclosure of the current application appears to more accurately support that the bumper strip is held in a manner that it is "flexed" or "bent". Therefore, to clarify the claims and to more accurately correspond with the structure disclosed by

the specification and drawings, it is suggested that the applicant replace the phrase “under elastic pre-tension” in line 6 of claim 13 with “in an elastically flexed condition” and to change “pre-stressed position” in line 2 of claim 18 and line 2 of claim 24 to “flexed condition” or some equivalents thereof.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 13-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maurer et al. (4,527,302) in view of Takahashi (5,108,801).

13. In reference to claims 13, 25 and 34, Maurer discloses a vacuum cleaner comprising a housing (12, 14 and 58) having an outer surface and an elastic bumper strip (30) with two longitudinal sides to cushion the vacuum cleaner from contacting other objects, said strip being located on at least some sections of the periphery (outer surface) of the housing wherein a first longitudinal side (248) is retained against the housing and a second longitudinal side projects from an external surface of the housing and is resiliently held against the housing by a retaining element (246) that projects outwardly from the housing along the outer surface of the housing adjacent the bumper strip and retains at least a portion of the bumper strip between the retaining element and the housing. However, Maurer fails to disclose that the second longitudinal side of

Art Unit: 3723

the bumper strip projects from the housing under no tension, that the retaining element holds the second longitudinal side of the bumper strip in a flexed condition against the housing, that the bumper strip contacts the retaining element such that the second longitudinal side of the bumper strip is elastically deformable to slide with respect to the retaining element while remaining in contact with the retaining element or that the bumper strip forms a convex curved structure that bulges outwardly from the housing. Takahashi discloses a bumper strip (36) that functions to protect a body from damage from contact with other objects, as well as provide a desirable appearance (Col. 1, lines 8-12) while allowing for easy attachment and removal and providing improved securing of the bumper strip (Col. 2, lines 16-19). Therefore, the bumper strip of Takahashi provides essentially the same function as the bumper strip of Maurer and it is further well known in the art that vacuums in general, as well as other household appliances may comprise any of a plurality of different bumpers having different structure and retaining elements. Thus, the bumper strip of Takahashi would be considered to be a known equivalent in the art of bumpers to the bumper strip of Maurer, wherein the bumper strip of Takahashi is further disclosed as having improved securing elements to secure the bumper strip. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, that a known bumper may be replaced by another known bumper having similar or the same functions so that the bumper strip and securing elements of Maurer may alternatively be replaced by the bumper strip and securing elements of Takahashi, as being known equivalents and to provide improved securing of the bumper to the housing, as taught by Takahashi. Thus, it further would

have been obvious that the housing of the vacuum cleaner of Maurer would have a first longitudinal side of the bumper strip of Takahashi retained against the housing using a socket similar to the socket (32) of Takahashi and that the vacuum cleaner would further include a retaining element similar to socket (30) of Takahashi to retain the second longitudinal side of the bumper strip against the housing. As disclosed by Takahashi, the socket (32) is designed to hold the first longitudinal side of the bumper strip such that the second longitudinal side of the bumper strip projects from the housing under no tension (as shown in Fig. 5) wherein the retaining element (28 that forms second socket 30) will hold the second longitudinal side of the bumper strip in a flexed condition against the housing (as seen in Figures 2 and 3) such that the second longitudinal side of the bumper strip will remain in contact with the retaining element (28) while inherently being elastically deformable to slide with respect to the retaining element (upon flexing of the bumper strip 36 due to impact with an object, the second longitudinal side of the bumper strip 40 would clearly be slidable against the surfaces on the inner portion of socket 30; even a slight rotation of the second longitudinal side of the bumper strip along an axis parallel to the second longitudinal side of the bumper strip would cause the second longitudinal side of the bumper strip to slide against the inner surfaces of the socket 30, thus sliding with respect to the retaining means 28). Takahashi further discloses that the bumper strip forms a convex curved structure that bulges outwardly from the housing.

14. In reference to claim 14, Maurer discloses that the housing is constructed of two parts having a first housing part (12) and a second housing part (58) wherein the first

Art Unit: 3723

longitudinal side of the bumper strip is attached to the first part and the retaining element (246) is positioned on the second housing part. Therefore, it further would have been obvious to provide the first housing part with the first socket (32) of Takahashi to receive the first longitudinal side of the bumper strip and to provide the second housing part with the second socket (30) and the retaining element (28) to receive the second longitudinal side of the bumper strip.

15. In reference to claim 15, as shown in Figures 2, 5 and 6 of Maurer, the first housing part is a lower part of the vacuum cleaner and the second housing part is above the first housing part, and may thus be considered to be an upper part of the vacuum cleaner. Therefore, it further would have been obvious that the elastic bumper will be attached to the socket on the lower part of the vacuum, as discussed *supra*, which may be considered to be constructed on the lower part of the vacuum and the retaining element will be constructed on the upper part of the vacuum cleaner (second housing part, as discussed *supra*).

16. In reference to claim 16, the limitation that the impact bumper strip is *molded* on the housing appears to be a product-by-process limitation wherein the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113). Therefore, although Takahashi fails to disclose that the bumper strip may be molded to the socket (32), a bumper strip and of Takahashi would have essentially the same structure and function if it the first longitudinal side of the bumper strip were

Art Unit: 3723

molded to the first socket (32), or alternatively, it would have been obvious to one of ordinary skill in the art that a bumper strip being formed separately and inserted into the socket (32) could obviously alternatively be formed by molding the bumper strip into the socket (32) to provide a stronger attachment for the bumper strip. Thus, the limitation that the bumper strip is molded to the housing would further be obvious over Maurer in view of Takahashi when the socket (32 of Takahashi) is provided on the housing, as discussed supra.

17. In reference to claim 17 and 33, Takahashi further discloses that the bumper strip has a point of weakening disposed near an intersection of the bumper strip and the housing (adjacent socket 32) in which the cross-sectional width of the bumper strip at the point of weakening is reduced compared with the cross-sectional width of the remaining portion of the bumper strip (as seen in Figures 2-5) to permit flexing of the bumper strip.

18. In reference to claim 18, as discussed supra, Takahashi discloses that the bumper strip is convexly curved outwardly in its elastically flexed condition.

19. In reference to claims 19, 32 and 36, Maurer further discloses that the bumper strip running around the periphery of the housing has at least one gap (at handle 25 and front piece 140, as shown in Fig. 1) interruption which divides the impact bumper into a plurality of sections (32 and 34; Col. 2, lines 59-63).

20. In reference to claim 20, when the retaining element of Maurer is replaced by the retaining element (28) of Takahashi, as discussed supra, the retaining element will be

constructed as a retaining strip which projects from a surface of the housing and is angled toward the impact bumper strip, as shown by Takahashi.

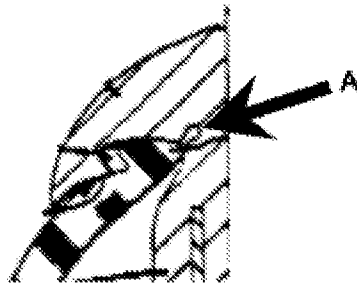
21. In reference to claim 21, the limitation that the retaining element is *molded* on the housing appears to be a product-by-process limitation wherein the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (see MPEP 2113). Additionally, Maurer further discloses that the retaining element (246) is formed integrally with the housing member (58; Col. 6, line 66 – Col. 7, line 2).

Although Maurer fails to disclose that the housing member (58) or the retaining element (246) are molded, the product wherein the retaining element is integral with the housing, as disclosed by Maurer, would be equivalent to a product wherein the retaining element is molded to the housing or wherein the retaining element and housing were molded together as a single part. Therefore, the limitation that the retaining element is molded to the housing would further be obvious over Maurer in view of Takahashi when the retaining element (28 of Takahashi) is provided on the housing as an integral part, as discussed supra.

22. In reference to claim 22, when the retaining element (28) of Takahashi is provided on the housing, as discussed supra, the retaining element (28) and the housing would define a receiving space (similar to socket 30 of Takahashi) in which the second longitudinal side (40) of the bumper strip is held.

23. In reference to claim 23, the receiving space, as discussed supra, would obviously be constructed as notch-shaped and be defined by an inner wall of the retaining element and an outer wall of the housing.

In reference to claim 24, Takahashi further discloses an embodiment (Fig. 2) wherein the socket (30) further comprises a notch base (A below) adjacent the socket (30) wherein the second longitudinal side of the bumper strip is held in an elastic flexed condition where the end of the second longitudinal side is located at a distance from the notch base.



24. In reference to claim 26, as discussed supra relative to claim 21, it would have been obvious to form the retaining element as an integral part of the housing. Further, when the bumper strip of Takahashi is connected to the housing, as discussed supra, will be considered to be integral with the housing because it will be a part of the vacuum cleaner as a whole, wherein the term “integral” is defined as “of, pertaining to, or belonging as a part of the whole”¹.

25. In reference to claim 27, Maurer disclose that the bumper strip is resilient (Col. 6, lines 66-68) and Takahashi disclose that the bumper strip is flexible. Additionally, as

¹ *Dictionary.com Unabridged (v 1.1)*

Based on the Random House Unabridged Dictionary, © Random House, Inc. 2006.

Art Unit: 3723

discussed supra, it may be obvious to form the retaining element as part of the housing, as taught by Maurer, and it is old and well known that vacuum cleaner housings are typically made from somewhat rigid materials, usually plastics. Therefore, it further would have been obvious to one of ordinary skill in the art at the time the invention was made that the bumper strip and retaining element may be formed from different materials, the material of the bumper strip being more elastic than the retaining element. Further, it is old and well known that a bumper, specifically on vacuum cleaners, is generally formed of a more elastic and flexible material than the housing because the bumper is designed to absorb impact forces that may damage the vacuum housing. Thus, it further would have been obvious that the bumper strip would be made from a more elastic material than the retaining element, especially when the retaining element is formed as part of the housing. Although Takahashi discloses that the retaining element is preferably resilient, the motivation for Takahashi to make a resilient retaining element is to make the retaining element easier to apply to different surfaces, wherein the retaining element would not need to be flexible in the case that the retaining element is formed as part of the housing because the retaining element will already be attached to the housing, and will not need to flex to conform to different surfaces.

26. In reference to claim 28, as discussed supra, the housing of Maurer includes a first housing part and a second housing part wherein it would have been obvious that the bumper strip would project from the first housing part and that the retaining element would project from the second housing part.

27. In reference to claim 29, also discussed supra, the second housing part is disposed above the first housing part and the retaining element would be disposed above the bumper strip, as shown by Takahashi.

28. In reference to claim 30, as discussed supra, relative to claim 26, it further would have been obvious that the bumper strip would be formed integral with the first housing part and the retaining element would be formed integral with the second housing part.

29. In reference to claim 31, as discussed supra, relative to claim 27, it would have been obvious that the bumper strip would be made from a more elastic material than the retaining element.

30. In reference to claim 35, as discussed supra, the housing of Maurer includes a first housing part and a second housing part, wherein it would have been obvious that the bumper strip would be formed integral with the first housing part and the retaining element would be formed integral with the second housing part and the bumper would be more flexible than the retaining element.

Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stein et al. (5,687,450), Buchtel et al. (4,993,105), Wolter et al. (3,869,265) and Ohira et al. (3,731,465) all disclose vacuum cleaners having bumpers with similar structure and/or orientation as the applicant's claimed invention and Couto et al. (discloses a bumper strip having similar structure and function as the applicant's claimed bumper strip.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN R. MULLER whose telephone number is (571)272-4489. The examiner can normally be reached on Monday thru Thursday and second Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail III can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bryan R Muller/
Examiner, Art Unit 3723
12/5/2007